REMARKS

This responds to the Office Action mailed on July 12, 2005, and the references cited therewith.

Claims 1, 6, 11, 16, 17 and 52 are amended, no claims are canceled, and no claims are added; as a result, claims 1-60 remain pending in this application.

Claim Objections

Appropriate correction to the typographical error in claim 52 has been made.

§103 Rejection of the Claims

Claims 1-4, 6-9, 11-14, 16-21, 27-30, 32-42 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cox (U.S. 5,991,426) in view of Iwamura (U.S. 6,425,081).

Claims 1, 6, 11, 16 and 17

In view of the similarity of features, claims 1, 6, 11 16 and 17 are discussed concurrently in this letter.

Amendments

Claims 1, 6, 11, 16 and 17 have been amended to relate to providing plural copies of content, each for a particular one of a plurality of clients. The claims now explicitly specify that each of the encrypted copies has a unique combination of sections marked with the first watermark and sections marked with the second watermark. Basis for the former amendment is to be found on page 9, paragraph 27 of the application as filed. Basis for the latter amendment is to be found on page 13, lines 1-5.

Novelty

The subject-matter of claim 1 is novel compared with US 5,991,426 (hereinafter: D1), because D1 does not disclose encrypting at least one part of content having a (first or second) watermark.

Instead, D1 discloses providing a field-based watermarked signal (column 5, lines 6-8), which is not encrypted.

The subject-matter of claim 1 is novel compared with US 6,425,081 (hereinafter: D2), because D2 does not disclose providing encrypted copies for each of a plurality of clients by combining parts of the encrypted copy with the first watermark and parts of the encrypted copy with the second watermark. Instead, D2 discloses that a first electronic watermark embedding unit embeds, in requested image data G, user information U (column 17, lines 38-40), and that the first encryption unit performs the primary encryption process E1() for the image data G+U (column 17, lines 40-42). The encrypted data E1(G+U) is not combined with any part of an encrypted copy of the information, let alone a copy with a second watermark added to it. Instead, the first encrypted watermarked copy is encrypted a second time to obtain secondary encrypted image data E2(E1(G+U)) (column 17, lines 48-50). Then it is decrypted once and combined with signature information S (column 17, lines 59-60). The signature information S is not itself an encrypted copy of part of the information U, nor has it a watermark embedded in it.

Claims 6, 11, 16 and 17 each comprise similar features that are absent from the disclosures of D1 and D2.

Obviousness

A combination of the teachings of D1 and D2 cannot lead to the subject-matter of claim 1, because some features in claim 1 are absent from both publications, and another feature would not be present in the only combination of the teachings of D1 and D2 that the skilled person might conceivably attempt to make.

The feature of encrypting a copy of at least one part of the content having a second watermark, e.g. a second copy of the content, is not taught in either D1 or D2. D1 teaches no encryption at all. D2 only teaches encrypting one copy of content, namely the information U (column 17, lines 40-42).

Even if the skilled person were to combine D1 and D2, he would apply the watermarking procedure outlined in D1 to the entirety of the information G in D2, rather than applying the encryption process E1 of D2 to each of the fields of a frame of video data as disclosed in D1. The object of the method outlined in D2 is to provide an authentication function with which a recipient can verify that the sender of a message is not perpetrating a fraud and the received messages has not been altered (column 2, lines 19-22). For this purpose, it suffices that the user receives the content with his signature S and a hash value over the content and the signature. It makes no sense to separate the content into two fields, watermark and encrypt each separately, and then carry out in duplicate the exchange set out in column 17, lines 45-67. Application of the field-based watermarking method of D1 to implement step 12 in Fig. 4 of D2 is the only sort of combination of teachings the skilled person has an incentive to make. The result of this combination would not be a method in which parts of *encrypted* copies with a first watermark and parts of *encrypted* copies with a second watermark are combined, because encryption would take place subsequent to the combination of fields.

The analysis in the previous paragraph is anyway moot in view of the fact that neither D2, nor D1 discloses combining parts of copies of content in a manner unique for an individual client, such that the encrypted copies have a unique combination of sections marked with a first watermark and sections marked with a second watermark. The combinations of watermarked fields that are made according to D1 are in no sense unique in terms of their component parts. One part always comprises the odd field in an image frame, and the other part always compriss of the even field. In an interlaced frame, one field holds the odd-numbered rows, whereas the other field is formed by the even-numbered rows (column 6, lines 16-18 of D1). In D2, all operations are carried out on a single copy of an entire piece of information G (see Fig. 4, for instance): a combination of parts does not take place.

The features that have been identified above as being absent from each plausible combination of the teachings of D1 and D2 define a contribution made by the invention to the state of the art, and render the subject-matter of this claim non-obvious.

As claims 6, 11, 16 and 17 define similar features, they are likewise deemed allowable.

Claim 27

The subject-matter of claim 27 is not obviously derivable from any combination of the teachings disclosed in D1 and D2. In particular, each of the two publications fails to disclose watermarking first and second copies of content and combining encrypted copies into a single stream.

D1 does not teach watermarking first and second copies of content, because the fields that are watermarked according to D1 are not copies of one another. Instead, an odd field comprises the odd-numbered lines of an image frame, whereas an even field comprises the even-numbered lines of the image frame (column 6, lines 16-18). These fields are described as "similar" (column 3, line 5), so that they can hardly be regarded as copies.

D2 does not describe watermarking first and second copies of content either. D2 describes that a first electronic watermark embedding unit 12 embeds user information U in requested image data G (column 17, lines 37-39). D2 also describes that a second electronic watermark embedding unit embeds signature information S in encrypted image data E2(G + U). The data in which the second electronic watermark embedding unit embeds the signature information S is thus not a copy of the data in which the first electronic watermark embedding unit embeds the user information U. D2 does not describe combining copies of data into a single stream either. Each data element in Fig. 4 exists as a single copy only at any one time. Therefore, it cannot be combined with a second copy, not even one that is not watermarked and encrypted.

It follows that the combination of the teachings of D1 and D2 fails to disclose all features of claim 27. For this reason alone, the subject-matter of claim 27 is not obvious.

Claims 32,37,42

In view of the similarity between their features, claims 32,37 and 42 are discussed together. Their subject-matter is not obvious having regard to the state of the art cited by the Examiner, because the combination of teachings of D1 and D2 does not yield all the features of any of these

claims. In particular, there is no disclosure in D1 or D2 of watermarking redundant parts in content, of encryption using a unique key for each unique watermark and a common key for other parts, or of combining encrypted parts of content into a single stream of data.

D1 does not disclose watermarking redundant parts in content, because the alternate rows or lines that form the two fields of an image frame are not redundant. Each is needed to build up the frame. D2 does not disclose watermarking redundant parts in content, because D2 does not disclose content having redundant parts or watermarking separate parts of content. A watermark U is added to the entire image data ("the requested image data": column 17, lines 38-40). A watermark S is added to the entire set of encrypted data with embedded user information (column 17, lines 59-60).

D1 does not disclose encryption using a unique key for each unique watermark and a common key for remaining parts, since D1 does not disclose any form of encryption of watermarked content at all. D2 does not disclose this feature, because, in D2, there are no parts remaining after watermarking (see Fig. 4).

D1 does not disclose combination of encrypted parts of the encrypted parts into a single stream of data, because D1 does not disclose any encrypted parts. D2 does not disclose combination of encrypted parts into a single stream of data, because D2 does not disclose a plurality of encrypted parts, disclosing only requested image data that is encrypted as a whole (see Fig. 4, for instance).

Clearly, because no combination of teachings from D1 and D2 will yield all the features of claims 32,37 and 42, the subject-matter of these claims is not obvious.

Allowable Subject Matter

Claims 23-26, 43-60 are allowed.

CONCLUSION

Applicant respectfully submits that all the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 408-278-4041 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

MARK ANDREW GEORGE WHITE ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
408-278-4041

Date Sept 21, 2005

By _____
Garth Vivier
Reg. No. 57,313

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 21 day of September, 2005.

Dawn R. Shaw — Dawn R. Shaw

Name — Signature